msi

MSI Cyborg 15 A13VE-681FR Intel® Core™ i5 i5-13420H Laptop 39,6 cm (15.6") Full HD 16 GB DDR5-SDRAM 512 GB SSD NVIDIA GeForce RTX 4050 Wi-Fi 6E (802.11ax) Windows 11 Home Black

Brand : MSI

Product name : Cyborg 15 A13VE-681FR

Product family: Cyborg

Article code: CYBORG 15 A13VE-681FR

MSI Cyborg 15 A13VE-681FR. Product type: Laptop, Form factor: Clamshell. Processor family: Intel® Core™ i5, Processor model: i5-13420H. Display diagonal: 39,6 cm (15.6"), HD type: Full HD, Display resolution: 1920 x 1080 pixels. Internal memory: 16 GB, Internal memory type: DDR5-SDRAM. Total storage capacity: 512 GB, Storage media: SSD. On-board graphics card model: Intel® UHD Graphics, Discrete graphics card model: NVIDIA GeForce RTX 4050. Operating system installed: Windows 11 Home. Product color: Black

Design

Colour name	Translucent Black
Product type *	Laptop
Product colour *	Black
Form factor *	Clamshell
Market positioning	Gaming

Display

Display diagonal *	39.6 cm (15.6")
Display resolution *	1920 x 1080 pixels
Touchscreen *	✘
HD type	Full HD
LED backlight	✔
Native aspect ratio	16:9
Maximum refresh rate	144 Hz

Processor

Processor manufacturer *	Intel
Processor family *	Intel® Core™ i5
Processor generation	13th gen Intel® Core™ i5
Processor model *	i5-13420H
Processor cores	8
Processor boost frequency	4.6 GHz
Performance cores	4
Efficient cores	4
Performance-core Max Turbo Frequency	4.6 GHz
Efficient-core Max Turbo Frequency	3.4 GHz
Efficient-core boost frequency	3.6 GHz
Processor cache	12 MB
Processor cache type	Smart Cache

Audio

Number of built-in speakers	2
Speakers manufacturer	Nahimic
Speaker power	2 W
Built-in microphone	✔

Camera

Front camera	✔
Front camera HD type	HD
Video capturing speed	30 fps

Network

Top Wi-Fi standard *	Wi-Fi 6E (802.11ax)
Wi-Fi standards	Wi-Fi 6E (802.11ax)
Mobile network connection *	✘
WLAN controller model	Intel Wi-Fi 6E AX211
WLAN controller manufacturer	Intel
Ethernet LAN	✔
Ethernet LAN data rates	10,100,1000 Mbit/s
Bluetooth	✔
Bluetooth version	5.2

Ports & interfaces

USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity *	2
USB 3.2 Gen 1 (3.1 Gen 1) Type-C ports quantity *	1
Ethernet LAN (RJ-45) ports	1
HDMI ports quantity *	1
HDMI version	2.1
Combo headphone/mic port	✔

Processor

Configurable TDP-down	35 W
Processor base power	45 W
Maximum turbo power	95 W

Memory

Internal memory *	16 GB
Internal memory type	DDR5-SDRAM
Memory clock speed	5200 MHz
Memory form factor	SO-DIMM
Memory slots	2x SO-DIMM
Maximum internal memory *	64 GB

Storage

Total storage capacity *	512 GB
Storage media *	SSD
Total SSDs capacity	512 GB
Number of SSDs installed	1
SSD capacity	512 GB
SSD interface	PCI Express 4.0
NVMe	✔
SSD form factor	M.2
Optical drive type *	✘

Graphics

Discrete GPU manufacturer	NVIDIA
Discrete graphics card model *	NVIDIA GeForce RTX 4050
Discrete graphics card memory	6 GB
Discrete graphics memory type	GDDR6
On-board graphics card *	✔
Discrete graphics card *	✔
On-board graphics card family	Intel® UHD Graphics
On-board graphics card model *	Intel® UHD Graphics

Audio

Audio system	Nahimic 3

Ports & interfaces

Charging port type	DC-in jack
USB Type-C DisplayPort Alternate Mode	✔

Performance

Motherboard chipset	Intel HM670
Repairability index	8.1

Keyboard

Pointing device	Touchpad
Numeric keypad *	✔
Keyboard backlit	✔
Keyboard backlit colour	Blue
Island-style keyboard	✔

Software

Operating system installed *	Windows 11 Home

Processor special features

Intel VT-x with Extended Page Tables (EPT)	✔
Execute Disable Bit	✔
CPU configuration (max)	1
Embedded options available	✘
Intel Virtualization Technology for Directed I/O (VT-d)	✔
Intel Virtualization Technology (VT-x)	✔

Battery

Number of battery cells	3
Battery capacity *	53.5 Wh

Power

AC adapter power	120 W

Security

Cable lock slot	✔

Weight & dimensions

Width	359.4 mm
Depth	250.3 mm
Height (front)	2.19 cm
Height (rear)	2.29 cm
Weight *	1.98 kg

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